Collaborative healthcare remodelling through sequential simulation: a patient and front-line staff perspective

Sharon-Marie Weldon, Roger Kneebone, Fernando Bello

Department Surgery and Cancer, Centre for Engagement and Simulation Science, Imperial College London, London, UK

Correspondence to
Sharon-Marie Weldon, Centre for Engagement and Simulation Science, Imperial College London, 3rd Floor Chelsea and Westminster Hospital (Academic Surgery), 369 Fulham Road, London SW10 9NH, UK; s.weldon@imperial.ac.uk

ABSTRACT

Background The Department of health funded an initiative to pioneer new approaches that would create a more integrated form of care.

Local problem In order to receive funding, local Clinical Commissioning Groups were required to engage a range of stakeholders in a practical approach that generated the development of an integrated model of care.

Intervention Two sequential simulation (SqS) workshops comprising 65 and 93 participants, respectively, were designed using real patient scenarios from the locality, covering areas of general practice, community health and adult social care. Workshops were attended by a diverse group of stakeholders. The first workshop addressed current care pathways and the second modelled ideal care pathways generated from the data obtained at the first workshop.

Methods Discussions were captured through video recording, field-notes and pre and post questionnaires. Data was collated, transcribed and analysed through a combination of descriptive statistics and thematic analysis.

Results The questionnaires revealed that attendees strongly agreed that they had had an opportunity to contribute to all discussions and raise questions, concerns and ideas (100%). Pre and post knowledge of current and new models of care was vastly improved. The opportunity to share information and to network was valued, with the SqS approach seen as breaking professional barriers (100%).

Conclusions Simulation can be used as a tool to engage stakeholders in designing integrated models of care. The systematic data collection from the diverse ideas generated also allows for a much-needed 'ear' to those providing the solutions, as well as a legitimate and balanced perspective.

INTRODUCTION

Starting in 2013, the department of health (DH) funded an initiative that spanned 14 boroughs across England designed to pioneer new approaches that would create a more integrated form of care.[1] Integrated care aims to address system fragmentation in order to improve the patient experience, while ensuring healthcare efficiency and value for money.[2] In order to receive funding, the DH required local Clinical Commissioning Groups (CCGs) to develop practical approaches that engaged front-line staff, patients, lay members and managers, in the development and visualisation of an integrated model of care.[1]

The difficulty in bringing various stakeholders together (who use different terminology and therefore speak different languages) is well known.[3] Longest[4] state:

'Communication between people who use different terminology can be ineffective simply because people attribute different meanings to the same words. When a message both is complex and contains terminology that is unfamiliar to the receiver, it is particularly likely that misunderstanding will occur. This contextual barrier often inhibits communication not only within health programs but also between health programs and many of their external stakeholders'. (p. 213)

The dilemma encountered by the CCG's was how to authentically engage a variety of stakeholders in the development and visualisation of an integrated model of care. Although there has been a drive towards more stakeholder involvement and, in particular, public and patient involvement over recent years,[5] these approaches rely on theoretical discussions and documentation, accentuating the stakeholder communication barrier. Bourdieu[6] argues that through this process situations are created in which health-related knowledge obtained through formal education is more highly valued than other forms of formal or informal knowledge held by stakeholders. The symbolic and cultural capital that healthcare professionals possess accentuates this issue further. Therefore, contributions by other stakeholders have the potential to be downplayed when in contrast to existing capitals and even shut out altogether when medical language is used. Elliott and Williams[7] propose that, in order to engage a range of stakeholders effectively, boundaries need to be broken down, experiences shared and mutual understanding built. They suggest "the development of initiatives, which may require professionals to engage in deliberations outside their traditional professional terrains both intellectually and sometimes physically" (p. 1113).

In light of these dilemmas, we propose simulation as a means to address these issues, while simultaneously broadening simulations application, and, in particular, SqS.[8]

Simulation has been traditionally used as a training tool for healthcare practitioners with particular clinical objectives. However, SqS (physically simulated trajectories of care) is a concept that we developed in order to address multiple training requirements from a patient's perspective. The overall concept takes elements of a patient's care pathway that are developed into a scenario-based simulation using real clinicians and simulated

patients in order to create a simulated experience from a patient's perspective. This concept was then further adapted to be used as a central focus for generating engagement and involvement of a variety of stakeholders in the development of a new integrated model of care. The SqS model has been designed through empirical data. It is objective based, thus ensuring each step in the pathway highlights the issues at hand. To date, SqS has been used for training healthcare professionals and workers holistically,[9 10] engaging young people with multidisciplinary teams,[11] engaging patients in research around new diagnostic interventions,[12] and designing new models of care.

The aims of this project were to utilise the SqS concept to inform, design and operationalise integrated care from a bottom up approach in order to fully engage and involve all stakeholders. This paper has two objectives: (1) To describe the methods and results of the engagement through sequential simulation approach, as well as their contribution to collaborative healthcare remodelling. (2) To describe the research methods and results used to understand this new application of simulation and its potential.

METHODS
In late 2014, an urban CCG and our research team at Imperial College Centre for Engagement and Simulation Science (ICCESS) collaborated to undertake two SqS workshops based around the development of a new integrated model of care for a Greater London Borough.

The first workshop comprised three scenarios based on real patient stories that were designed through the SqS model and subsequently sequentially simulated, covering areas of general practice (Raj's story), adult social care (John's story) and community health (Navneeta's story). Each simulated scenario was followed by facilitated table discussions (8–10 people per table) to identify issues in the current system, solutions to these issues and red tape that prevented solutions. A clinical group facilitator captured data from the discussions. Further discussions were held at a whole group level (65 participants) (figure 1) and captured through video recording and field-note taking. Pre and post questionnaires were also completed before and after each

workshop that addressed the application of simulation in this format. All the data from the first workshop was collated and analysed through a combination of descriptive statistics and thematic analysis. The remodelling data was split into the associated story issues, solutions and red tape. Themes were identified in the issues data and corresponding solutions were compiled under the identified themes. Based on this information, three new 'ideal world' scenarios were designed using the SqS model from the data collected.

The second workshop format started by replaying a video of the first workshop SqS scenarios, followed by a run through of the analysed data and then the SqS of the new co-designed scenarios. The same format as the first workshop of smaller facilitated table discussions (8–10 per table) and larger group feedback sessions (figure 2) then followed (93 participants). Data was captured in the same process as for the first workshop and analysed in the same way.

The following sections depict one of the three scenarios (Navneeta's story), run across both workshops, as an example of the methods used and the results obtained.

Figure 3 describes the care pathway of Navneeta simulated during workshop 1. The SqS scenario was designed using a real patient's story entered into the SqS model in order to ensure it met the required objectives.

After Navneeta's SqS, the attendees were split into mixed professional/patient groups of 8–10 and were required to discuss: *What was wrong with the current system?* (eg, where are the gaps? duplication, fragmentation in the current system?); *What should be changed?*; *What are the red tape issues?* (eg, not in my job description, or 'the process does not allow me to do xyz and/or issues around organisational culture—how people view themselves, their role and their organisation, difference between sectors/professions); *What resources are needed for this?* (eg, time, manpower, money, training); *What communication systems are needed* (eg, what do people need or want to know? and/or what IT changes would make a step change in how to integrate and improve their work?); and any *other issues.*

Each group was provided with a facilitator from a health and social care background who took detailed notes and ensured the
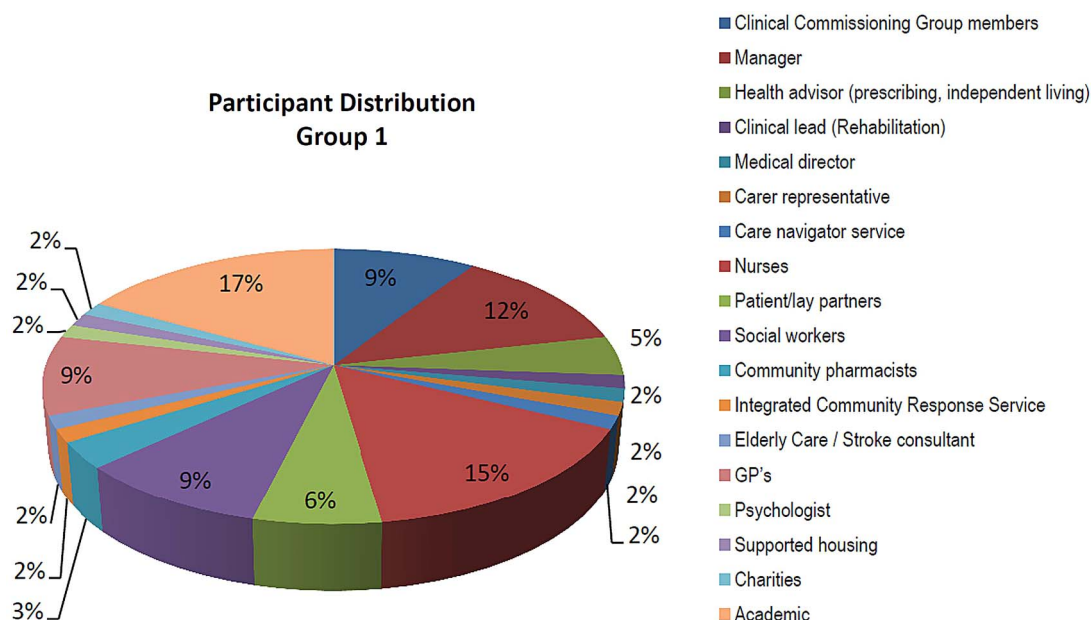

Figure 1 Workshop 1 attendance grouped by role (65 attendees). GPs, general practitioners.
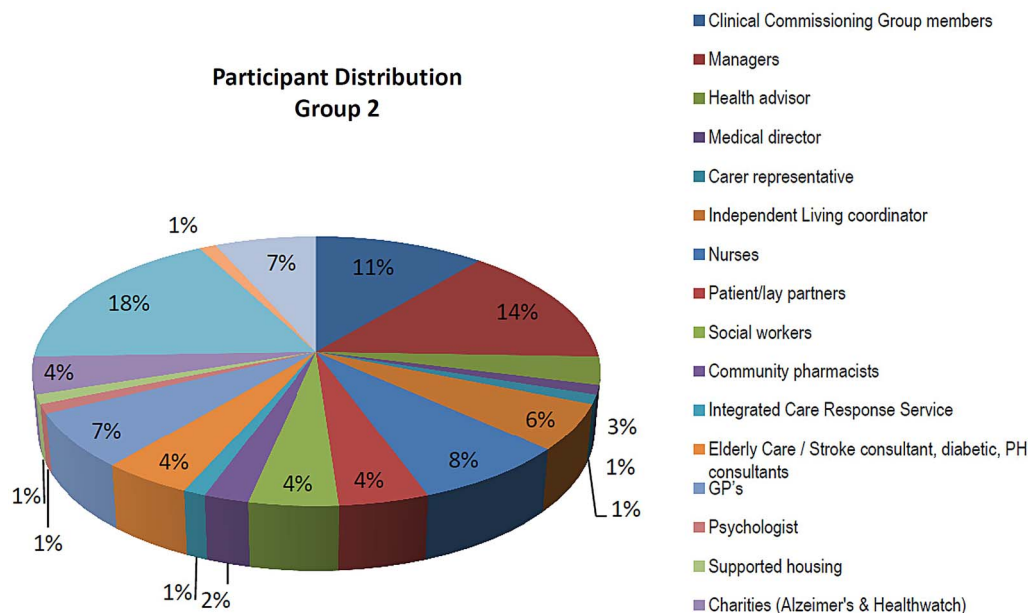
Figure 2 Workshop 2 attendance grouped by role (93 attendees). GPs, general practitioners.

Figure 3 A diagram of Navneeta's 'current' sequentially simulated story. A&E, accident and emergency; COPD, chronic obstructive pulmonary disease; GP, general practitioner; IV, intravenous.

discussions addressed the required questions. After 45 min, the attendees were brought back into the larger group to feedback the key points of what they had discussed. This feedback was video recorded (and later transcribed) and further notes were taken for subsequent thematic analysis.

From the above information retrieved, a new scenario was derived of what could have happened to Navneeta based on the attendees' suggested solutions. In order to provide consistency for the SqS and to ensure the new approach is not too 'idealised', the 'ideal' scenario was started at the same place the original scenario started. Figure 4 depicts the new 'ideal' simulated scenario.

After the SqS, the attendees were again split into mixed professional groups of 8–10 and this time were required to discuss: *What works in the new system?* (MDT/Care Plan/Care Coordination/Empowerment and Self-Help); *What does not work?*; *What might prevent the new system from working as intended and what do we do about this?*; *What's missing from 'our' model of care?*; *Is there a smarter way of delivering person-centred care for Navneeta?*; *What resources are needed for this?* (eg, time, manpower, money, training); *What might I need to do differently in my role to make these changes happen?*; *What training or support might I need to do my work in this scenario?*; *How do I and my colleagues in other organisations work as a team?*; and any *other issues* (eg, red tape/organisational/ culture differences). Each group was again provided with a facilitator from a health and social care background who took detailed notes and ensured the discussions answered the required questions. The facilitators were also asked to consider the following:

▶ Re-orientate the team around a culture of delivering a seamless, person-centred care to the patient/service user/carer, regardless of which organisation is providing that part of the service.
▶ Check the effectiveness of the care plan, particularly from the front-line staff perspective.
▶ Give some thought to how we treat cross-border issues.
▶ Agree on the composition of the MDT—persons in the MDT must be the people who deliver the actual care to the patient or carer.
▶ If there is a core and satellite team model, how should the availability of MDT members best be utilised.
▶ Agree the roles and responsibilities of MDT members and the skills and behaviours needed.
▶ Decide where MDT members are to be physically located and how they are to come together in the MDT.
▶ Decide how often the MDT will meet, the range of conditions and the numbers of patients to be seen.
▶ Agree how health and social care assessment processes can be integrated.

After 45 min, the attendees were brought back into the larger group to feedback the key points of what they had discussed.
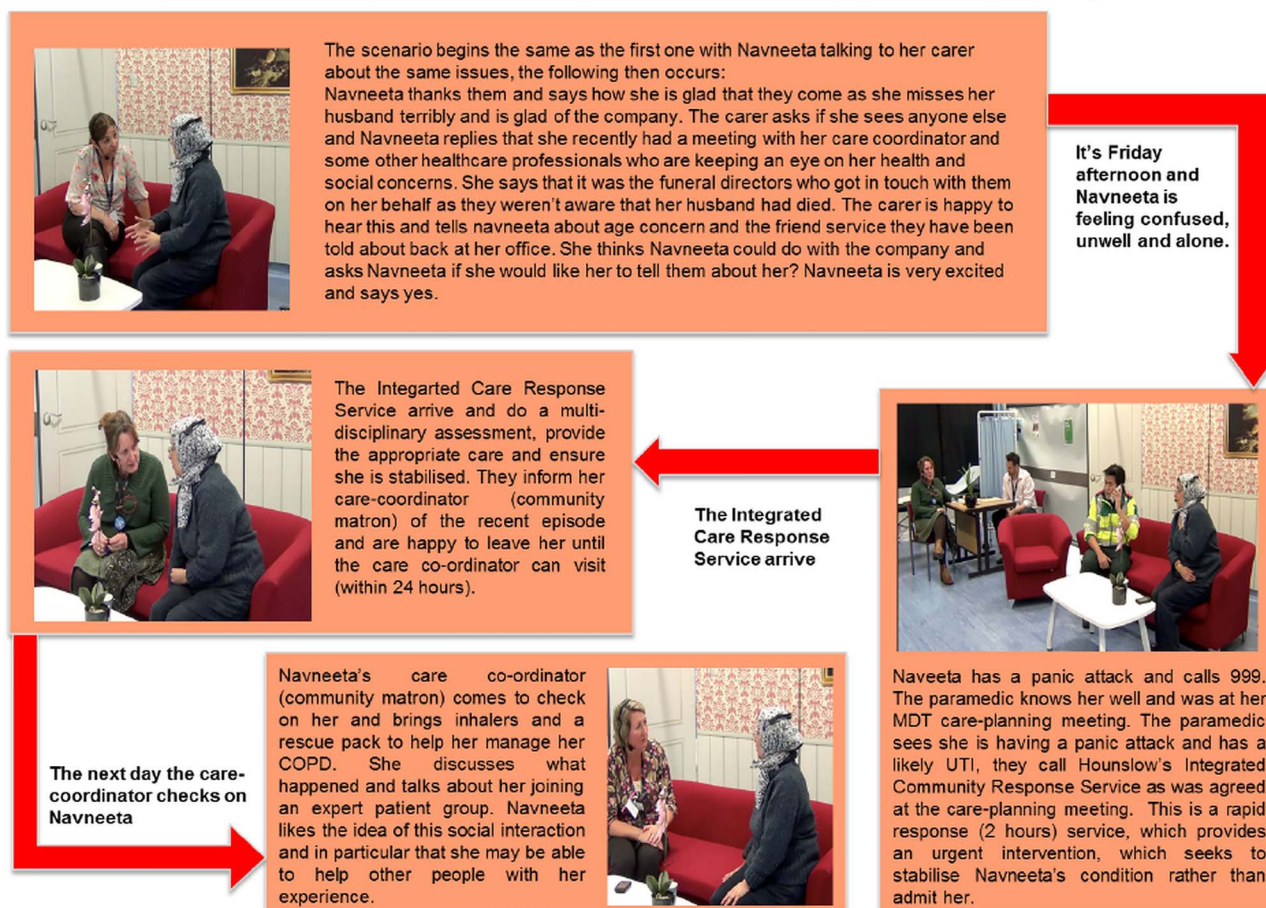

Figure 4 A diagram of Navneeta's sequentially simulated 'ideal' story. COPD, chronic obstructive pulmonary disease; MDT, multidisciplinary team; UTI, urinary tract infection.

Table 1 Categorised thematically analysed data of Navneeta's current story

Identified issues	Suggested solutions
Training, knowledge and empowerment	
Lack of consistency	Lack of consistency
▸ Too many different carers—no continuation of care	▸ Continuity for carers—acknowledgement of roles
▸ Residential 6 weeks—different carers	▸ Increased empowerment of carers to be proactive with support/care referrals—workforce education regarding vulnerable adults
Insufficient knowledge/powers	▸ Telephone support/telehealth
▸ Lack of knowledge of carers—better standards required	▸ Prompts for carers—is your pt. showing signs of depression?
▸ Call worker—phone	▸ Carer needed more freedom to act on her behalf
▸ The carer did not call the GP	▸ Increase pay of London allowance to encourage carers
▸ Carer could have rung the GP	▸ Same carers—bluebird system
▸ Carer should have contacted the GP directly	Insufficient knowledge/powers
▸ The carer did not have enough training	▸ No dumping—shared care
Lack of Communication	▸ Training for carers—complex care
▸ Lack of communication between teams	▸ More proactive training for carers
▸ No-one wanted to take responsibility for the patient	Lack of Communication
Lack of time	▸ Multiple hospital admissions should be an indicator
▸ Time for carers—not enough	▸ Care-coordinator in place
▸ The careers on have 15/20 min for each visit and in some boroughs do not get paid between visits	▸ Raising awareness of pharmacists
	▸ Redistribute
	▸ Better communication between hospital and the GP
	▸ Every person in a care team should proactively manage a patient
	▸ The trust should use more voluntary services
	▸ Bank of information for all professions
	▸ Communication between carer and GP
	▸ There should be better communication between the carer and GP and hospital and GP
	▸ Multiagency, data analysis of frequent hospital admissions
	Lack of time
	▸ Time for carers as caseworker
Isolation	
Loneliness	Loneliness
▸ Isolation of patient	▸ Better use of befriending/voluntary services
▸ Lack of human contact	▸ Resources for loneliness and social isolation
▸ Loneliness	▸ Friend service
Bereavement	▸ Age concern
▸ Bereavement	▸ Extra sheltered care—activities available
▸ We need to find ways of stopping medicalising everything when it is actually a social isolation and potential a loneliness bereavement issue	Bereavement
	▸ Engage with people like funeral directors
Behaviour	▸ Religious groups
▸ Learnt behaviour and dependence	▸ Time and face to face contact needed
	Behaviour
	▸ Try to identify the assets that the pt. can give back to the community
Service breakdown	
System communication mechanisms	System communication mechanisms
▸ 999 services—co-ordinated working—not pushing to acute care!—improved pathways	▸ Discharge note to GP?
▸ System failure	▸ Social worker?
▸ 999—taking responsibility—GP	▸ Care planning
▸ Not 1 of 5 people who saw the pt. took responsibility	▸ Simplify the system
▸ If her husband died and no one alerted the pharmacy. Where do we link that up so that the pharmacy is made aware?	▸ Teams aligned together
▸ It there was a way of following trough someone's bereavement. They get quite a lot of care for the first 8 weeks and then there is a gap.	▸ Improved triage of emergency calls
▸ No communication between the implementers of IT systems and the people who use the systems	▸ Sharing of information between services
	▸ Streamline communication with hospital
Reactive	▸ How can communication processes be joined up?
▸ Reactive approach rather than proactive approach	▸ One page sheets for paramedics to know what are 'normal' parameters
▸ Systems need to be put in place before they go home	▸ Social workers within general practice
▸ The paramedic seemed unable to leave the pt. at home	▸ GP protocol communication, or careers; floating (?) support
▸ It took a while for that relationship to be developed for the consultant to realise this a pattern and to contact her GP	▸ Yellow pages of services
	Reactive
	▸ Care navigator service
	▸ A&E case worker
	▸ Red/amber/green volunteer services
	▸ Demand manager
	▸ Integrated response team was needed
	▸ Culture needs to be changed regarding expecting a home visit
Support	
Bereavement	Bereavement
▸ Poor bereavement support/social support	▸ Bereavement support from GP services
▸ It was not just bereavement she was missing	▸ Proactive bereavement support process
Appropriate support	▸ Duty Dr system can help with conversations (Dr rings you back) and many help with someone to talk to
▸ She did not have a nursing need more in the remit of social care	▸ Bereavement is the key to this and many patients
▸ Lack of information about pills	

Table 1 Continued

Identified issues	Suggested solutions
► Signposting of support needs to be better	Appropriate support
	► Promote independence
	► Voluntary organisation
	► Re-enablement services are important
	► Pharmacist make a call to the GP
	► Support group activities not joined up, for example, Healthy in Hounslow Event
	► Supported housing network, would be hugely beneficial. They notice if the social interaction is not taking place.
	► Should we be working with funeral directors to improve help for people who have been bereaved or faith communities?
	► Need for one person to be engaged to 'care' for the patient to be able to support
	► 'Tea bag on wheels'

Red tape issues
- ► Care support workers/carers/care-navigators—complicated!
- ► Restrictions due to capacity
- ► We rely on carer feeding back issues but not mechanism for this
- ► The whole system is not constructed in a way to identify if patients are accessing the services.
- ► Who co-ordinates/navigates care—not clearly articulated
- ► Professionals need to know services available
- ► Lack of information about services no longer in existence
- ► What can GP do?
- ► Who should care navigate
- ► Current bereavement service will not visit pts. In their houses
- ► Hounslow needs a service data base like the voluntary support service database—Needs to be up-to-date, comprehensive and searchable by religion, ethnic, geographic location, etc.

A&E, accident and emergency; GP, general practitioner; IT, information technology; pt, patient.

This feedback was video recorded (and later transcribed) and further field notes were taken by the research team.

Ethical considerations

RESULTS
Remodelling data results

All the data collected from SqS Navneeta's story discussions was collated and divided into: Identified solutions, suggested solutions and red tape issues. The data was then further categorised under main theme headings (see table 1 for a table format of this data). Under the main theme headings, further sub headings were identified and categorised and corresponded to both the identified issues and suggested solutions categories. The following is an overview of the issues identified and suggested solutions to these issues. Interestingly, in all categories many more solutions were identified compared with issues.

Workshop 1: Data summary of Navneeta's care pathway

It was identified that there was a lack of consistency, training, time, knowledge and power for carers to flag up issues, even though they are in a privileged position to do this. Communication between health and social care providers needed to be more coherent and mechanism needed to be put in place to support this.

Many voluntary services and re-enablement service are available to empower patients to become more independent and less isolated. However, mechanisms to identify who needs these services are limited. Bereavement is a good example of a change in circumstances that can cause individuals to become isolated and lonely and links should be made to funeral services and religious groups to work out how to flag these happenings. Professionals need to be better at not medicalising everything and instead recognising the social issues that cause the medical problems.

Other system breakdowns include the link between 999 calls, paramedics and primary care. Information between these services needed to be shared to prevent unnecessary admissions. A care coordinator, accident and emergency case worker or integrated care team is needed to join the dots in these cases.

Workshop 2: Data summary of Navneeta's 'ideal' suggested solutions

Using an Integrated Community Response Service (ICRS), a care coordinator and a joined-up approach with paramedics was identified as a good approach by attendees. However, attendees felt that the approach could have worked better if pharmacists and the voluntary sector would have been involved and the root cause (bereavement) would have been identified earlier on. They also felt that the learned behaviour of calling 999 had to be addressed too. Still missing from the scenario was a bereavement trigger mechanism that would identify individuals who had a recent change in circumstances due to bereavement. If this was available, an assessment could be made early on to identify the patients' needs and create a care plan. In order to achieve this and a more joined up approach, attendees felt a proper IT structure accessible to all was paramount (see table 2 for catergorised data).

Workshop 1: Participant attitudes towards the use of SqS pre and post-questionnaire results

The prequestionnaire workshop revealed that very few attendees had any or much knowledge of the current system in which they worked (87%). However, by the end of the workshop, this was improved vastly with 100% of attendees stating they had some or a lot of knowledge. 90% felt that their knowledge of the current system had improved with one respondent stating "Really useful to talk to other services in in the area, nice to put

What works in the new system

Services	Carers	Joined up	Roles	Other comments
▶ Saved a hospital admission ▶ Increased consistency ▶ Responsible ▶ Accessed the services available ▶ Referral to ICRS-direct from London Ambulance Service (primary care mental health, strategies for panic attacks) ▶ Non-medical prescribing ▶ Access to twilight nursing service ▶ Avoided hospital admission ▶ Admission avoided	▶ Carer was empowered ▶ Care agency support ▶ More pro-activity to carers—referring	▶ Appropriate referral—vital ▶ Joined up better, but not perfect—pt not empowered—socialisation ▶ More joined-up thinking ▶ Community matron involved coordinator	▶ This does work in reality but paramedics would phone Hounslow Integrated Response Service, this is good for 7 days, after that they would come. ▶ ICRS worked well, normally GP within the team records can be seen by GP	▶ Age concern less isolated

What did not work

Support
▶ Still not tackling the essence of the problem
▶ Root cause of anxiety not tackled, no bereavement service
▶ Transport for befriending—potential to go out- voluntary service
▶ Becoming more dependent—no obvious plan
▶ Bereavement still an issue
▶ Poster in house if further help needed
Roles
▶ Where referrals are coming from changed—community referral.
▶ GP set not nurse and social worker
▶ Patient group directive—pharmacists trained to prescribe on feedback to GP—email
▶ Paramedic—fully trained and empowered
▶ Rehab—extend to physio—pt getting out and about
▶ Communication between care agency and community matron
▶ Health/social services separate funding needs to be more seamless.
Services
▶ Real world scenario—age concern (waiting list)
▶ 07:00–19:00 hours–7 days a week.
▶ Calling 111—produce automatic 999 callout
▶ The use of community pharmacy was a good step forward but it could have been taken further and there are community pharmacists in other areas who actually prescribe and dispense the trimethoprim for a UTI infection so you do not actually have a referral from a GP it is performed under what is now as a Patient Group Directions patient group directive, the information is then sent by email to the NHS.net system to the GP so they are aware in real time that this antibiotic has been dispensed but it would have saved a lot of time
▶ I think the root cause was not mechanised by the care and I think the care package was not right because it had not been staff matched, they could have easily found out the root cause of why she was anxious, you know her husband had just died, and it was very simple actually but no one really recognised that it was still going on reactive as supposed to proactive

What was missing?

Support
▶ Bereavement counselling
▶ Re-enablement
▶ Supporting people service
▶ Addressing the mental health issues
▶ Generation of 'support plan'
▶ Psych input for anxiety
▶ Bereavement support
▶ Needed befriending/companionship
▶ Family not identified
▶ Staff matching for cultural needs
▶ Social worker to take a voluntary list and pitch 'befriender'
▶ Pt. wanted companionship—she needs volunteers/home visitors
▶ Council (on register of death) contact GP within 48 hours
▶ Fit link line
▶ Directory
▶ Difficulties and caring society—need to empower patient and knowledge—how they access the knowledge?
▶ Learned pattern/sick role needs to be broken
▶ Link line (emergency button)—carers
▶ An understanding of her loneliness and isolation
Services
▶ Passing on information/highlighting problematic systems
▶ Notification when registering death to Local Authority—to do a home visit within 3 months—check fire/fire alarms/slip, trip, falls/heating—signposting to schemes ie, come and repair handyman.
▶ Ask permission over 75 years—thread through system 1—GP
▶ COPD management
▶ Is her home situation appropriate? Does she need to be in sheltered accommodation—social care not explored
▶ Voluntary sector (but commissioned) rapid response?
▶ Staff remain rushed even in second scenario
▶ Higher salary for carers training
▶ Carers taking responsibility
▶ Funding—personal budgets—pt. and carers had assistance
▶ Hiring the right people/levels
▶ Difficulty contacting carers back if they identify problems
▶ Provision of information -? carers
▶ Build a case for educated carers and service community
▶ 7 days a week working
▶ Better informed patient and carers
▶ Registered carers list information given
▶ Awareness among patients about what is available.
Care planning
▶ Care plans in place and information (signs etc)
▶ Need for individualised care—all pts. need different intervention
▶ Integration sharing support plan/care plan
MDT
▶ Referral to other services
▶ Whole system about team
▶ Different referral criteria
▶ Not always GP led
▶ Social care does not share data with health
▶ Lack of understanding of roles by patients and carers
▶ Not all pharmacies deliver
▶ Pharmacy—blister packs could be provided

Table 2 Continued

What did not work	What was missing?
	▶ Mental health could have been engaged
	▶ Night nurses
	▶ Poor retention of staff at GP services
	▶ Home care individual—care manager—social worker to review patient in a holistic sense
	▶ Training needs analysis—empowering paramedics to refuse admission
	▶ GP/occupational therapist/ICRS/pharmacy/funeral directors? Age concern/carers
	▶ Need communication between teams. Do not know who is doing what—shared care plan. Gaps picked up by team and referred.
	▶ Learning disabilities have integrated approach
	▶ May need a Sla for a P.G.D.
	▶ 55 pharmacy contractors—more involvement
	▶ Paramedic needs awareness of the care pathway—long-term condition
	▶ Memory testing/clinic needs GP referral
	▶ Dementia?
	Technology
	▶ Proper IT structure—referral system accessible to health professionals—must be available for ALL
	▶ Technology—medicines
	▶ Data coming out of GP patient records to share data across organisations—scared it will get in the wrong hands
	Triggers
	▶ Bereavement input and triggered response
	▶ Community communication linking services
	▶ Bereavement service
	▶ Being aware District nurses/GP's do not always know about deaths
Other red tape issues	

▶ Not always meeting criteria
▶ ICRS 7:00–19:00 only
▶ Community are cutting 'day services'

COPD, chronic obstructive pulmonary disease; GP, general practitioner; ICRS, Integrated Community Response Service; MDT, multidisciplinary team; NHS, National Health Service; UTI, urinary tract infection.

faces to names". The SqS approach was also highly rated with 100% of attendees stating it was beneficial to them, and 95% stating it was necessary to get the points across. One attendee stated "Stimulates thinking in a way written case study does not" and another "Very useful in stimulating the discussions and improves participation". Other things that attendees enjoyed about the workshop was "Ability to provide input which will (hopefully) bring real change and improve things in future" and "The scenarios were very interesting to see how others work". When asked what they would change about the day the majority of responses were practical in terms of room temperature and size, however one respondent stated "Information on how other areas are doing, whole systems or other similar projects are doing this. Also worth learning about their achievement so we don't reinvent the wheel!"

Workshop 2: Participant attitudes towards the use of SqS pre and post-questionnaire results
The feedback from the second workshop also revealed that attendees felt they had an opportunity to raise questions, ideas and concerns (100%), and 95% felt they had had the opportunity to make a useful contribution to the new model of care. Eighty per cent of attendees said their knowledge of the new model of care had improved with one attendee stating "Knowing different service available. MDT involvement, importance of other areas, finding the missing link". All attendees agreed that the simulation content and simulation as a focus for discussion was good and excellent with one attendee stating 'Captures the needs of the client' and another 'A good way/method of training'. When asked how they felt about SqS

as an approach, respondents stated "It is very helpful to see imagined solutions in practice, that is, Raj—suggestions from workshop 1 didn't really work when we saw them in practice" and another "I thought the simulation idea really worked well as you could see clearly what would work and what doesn't work" as well as "I think it works well, because it enables you to see what approach is used and why it is working or not working." Ninety-five per cent of attendees at the second SqS workshop felt the Sequentially simulated scenarios helped them to visualise how the new model of care might work in practice "It did visualise the new model. I feel we have a lot of good services and systems in place. We channel them better". One hundred per cent said the SqS was beneficial to them and 90% said it was necessary to get the points across—"Helped get diverse audience to combine understanding". Overall, attendees felt the workshop was successful with one attendee stating "The enthusiasm and engagement of all the participants—tribute to the event that more people came for the second session" and "Simulations had a human element and a touch of humour. Helped whole integrated care appear real" as well as "Change in outcomes of simulation through integration and overall approach". The CCG lead stated "The data taken from the sequential simulation workshops has helped us to create an in-house operating model".

DISCUSSION
This approach to engaging and co-designing solutions to new models of care with key stakeholders was received positively. The feedback from the workshop questionnaires revealed that attendees at both workshops strongly agreed that they had had

an opportunity to contribute to all discussions and had plenty of opportunities to raise questions, concerns and ideas. The pre and post knowledge of current and new models of care was vastly improved in both workshops and the opportunity to information share and network was appreciated with the SqS approach breaking professionals barriers and identifying roles and services. The SqS's enabled attendees to visualise current services, as well as their own 'idealised' models in practice before any implementation process had been considered.

The process of using various data collection methods to capture as much of the discussions as possible, as well as the mixing of professionals into smaller facilitated groups, proved to be an effective way of engaging and involving front-line staff and patients in new system modelling. This data capturing and engaging process also enabled the formation of a final report that was available to the CCG and disseminated further, revealing stakeholder knowledge and understanding, their questions and concerns; as well as their valuable input into how to make an integrated system work at an operational level.

The atmosphere at both workshops was extremely positive and provided an opportunity to start a culture shift from what cannot be done to what can be done and how. Attendees felt that they were being listened to. This was further verified by seeing their discussions in an analysed format and the subsequent 'idealised' scenario generated. Further proof of this comes from the repeated requests of attendees to have copies of the final report.

In order to keep momentum, the workshops were held 8 days apart. This therefore required a lot of organisation and a dedicated group of people to ensure consistency across both workshops. Skills in simulation and research approaches were essential components to ensure authenticity and rigor; both integral to this remodelling approach.

Limitations

Owing to the nature of the SqS model, the direct results of the remodelling data collected cannot be generalised. However, the concept itself is transferrable. Efforts were made to ensure all attendees had a 'voice'; this is apparent through the varied forms of data collection utilised.

The practicalities, manpower and simulation and research skills required to undertake this collaborative healthcare remodelling approach is significant; and good design and planning essential. However, the benefits potentially generated in terms of breaking down professional barriers, culture shifting, design and evaluation of, as well as, buy in to new models of care is also significant and both should be considered when undertaking this approach.

Conclusions

The need and usefulness of this approach is apparent from the attendee's feedback, as well as the remodelling data co-generated. The SqS model approach enables this form of SqS to be tailored to local contexts ensuring it is transferrable in a bespoke manner. The systematic approach to data collection from the diverse ideas generated through the SqS also allows for a much needed 'ear' to those providing the solutions, as well as a legitimate and balanced perspective.

Further studies of this approach are needed in order to understand the rich and complex benefits that SqS can provide in terms of collaboratively remodelling healthcare. Additional data is currently being collected and analysed by the authors.

REFERENCES

1 NHS England. *Integrated Care and Support Pioneer Programme: Annual Report 2014*. http://www.local.gov.uk/documents/10180/6927502/Integrated+Care +Pioneer+Programme+Annual+Report+2014/ 76d562c3-4f7d-4169-91bc-69f7a9be481c (accessed 1 Dec 2015).
2 Nuffield Trust. An overview of integrated care in the NHS: what is integrated care? 2011. http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/what_is_ integrated_care_research_report_june11_0.pdf (accessed 25 Nov 2015).
3 World Health Organisation. A glossary of terms for community of health care and services for older persons. 2004. http://www.who.int/kobe_centre/ageing/ahp_vol5_ glossary.pdf (accessed 24 Nov 2015).
4 Longest BB Jr. *Health programme management: from development through evaluation*. San Francisco: John Wiley & Sons, 2014:211–17.
5 NHS England. TRANSFORMING PARTICIPATION IN HEALTH AND CARE 'The NHS belongs to us all'. 2013. https://www.england.nhs.uk/wp-content/uploads/2013/09/ trans-part-hc-guid1.pdf (accessed 25 Nov 2015).
6 Bourdieu P. *The logic of practice*. Cambridge: Polity Press, 1990:112–20.
7 Elliot E, Williams G. Developing public sociology through health impact assessment. *Sociol Health Illn* 2008;30:1101–16.
8 Kneebone R. Simulation, safety and surgery. *Qual Saf Health Care* 2010;19(Suppl 3):i47–52.
9 Weldon SM, Ralhan R, Paice E, *et al*. Sequential simulation (SqS): an innovative approach to educating GP receptionists about integrated care via a patient journey– a mixed methods approach. *BMC Fam Pract* 2015;16:109.
10 Weldon SM, Ralhan R, Paice E, *et al*. Sequential simulation of a patient journey. *Clin Teach* 2016;13:1–5.
11 Powell P, Sorefan Z, Hamilton S, *et al*. Exploring sequential simulations potential as an educational tool in paediatrics. *Clin Teach* 2015;12:1–7.
12 Weldon SM, Coates L, Kneebone R, *et al*. Hounslow Whole System Integrated Model of Care Sequential Simulation (SqS) Workshops, Health Education North West London—Simulation: Is a New Approach Needed? *Conference*; 2014.